

Contrib

F.M. **LIBRARY**



Class 119.15 F.45 lb

COMMON TREES

BY

J. FRANCIS MACBRIDE

ASSISTANT CURATOR OF THE HERBARIUM



BOTANY

LEAFLET 11

SECOND EDITION

FIELD MUSEUM OF NATURAL HISTORY
CHICAGO

1936

122491

The Botanical Leaflets of Field Museum are designed to give brief, non-technical accounts of various features of plant life, especially with reference to the botanical exhibits in Field Museum, and of the local flora of the Chicago region.

LIST OF BOTANICAL LEAFLETS ISSUED TO DATE

No. 1.	Figs	\$.10
No. 2.	The Coco Palm	.10
No. 3.	Wheat	.10
No. 4.	Cacao	.10
No. 5.	A Fossil Flower	.10
No. 6.	The Cannon-ball Tree	.10
No. 7.	Spring Wild Flowers	.25
No. 8.	Spring and Early Summer Wild Flowers	.25
No. 9.	Summer Wild Flowers	.25
No. 10.	Autumn Flowers and Fruits	.25
No. 11.	Common Trees (second edition)	.25
No. 12.	Poison Ivy	.15
No. 13.	Sugar and Sugar-making	.25
No. 14.	Indian Corn	.25
No. 15.	Spices and Condiments	.25
No. 16.	Fifty Common Plant Galls of the Chicago Area	.25
No. 17.	Common Weeds	.25

STEPHEN C. SIMMS, DIRECTOR



AMERICAN ELM

FIELD MUSEUM OF NATURAL HISTORY
DEPARTMENT OF BOTANY
CHICAGO, 1936

LEAFLET

NUMBER 11

COMMON TREES

AMERICAN ELM

(*Ulmus americana*)

Even before George Washington took command of the Revolutionary troops under the now famous "Washington Elm," of Cambridge, Massachusetts, the elm, native to our river woods, was being planted as a shade tree. The Washington tree has recently died but many of its contemporaries are still among the finest planted examples of this historic American tree. The best-known elm near Chicago is probably the old Blackhawk Treaty Tree at Evanston.

The elm's manner of growth is usually very characteristic, the main branches being nearly upright with their foliage-bearing terminal branchlets curving and drooping.



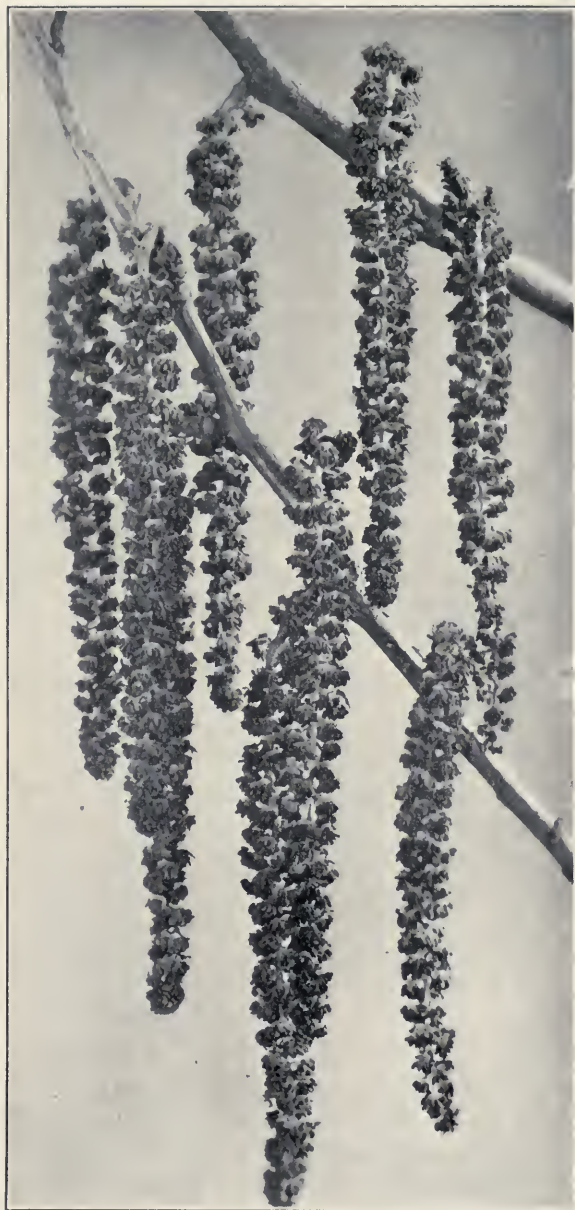
FLOWERS OF AMERICAN ELM

For a few days in very early spring, long before the leaves come out, the twigs appear "fuzzy" due to the opening of the small clustered blossoms. These tiny inconspicuous flowers are followed by small wafer-like fruits.



LEAVES OF AMERICAN ELM

The slippery elm, so-called because of its mucilaginous inner bark, may be distinguished by the very rough upper surfaces of its leaves. The leaves of the cork elm, another rather common species, are smooth on both sides and the branches are usually corky ridged. (Elm Family)



COTTONWOOD CATKINS



COTTONWOODS

(*Populus* species)

The cottonwoods or poplars belong to the willow family, but our species are all easily distinguished from the willows by their broad, somewhat heart-shaped leaves. The leaf stalks of most species are flattened at right angles to the leaf blades, which accounts for the characteristic trembling of the foliage in the slightest breeze.

The sticky buds begin to swell in early spring and the long drooping catkins of flowers emerge before the leaves. The familiar "cotton" that for a time is so conspicuous about the tree contains the ripe seeds, which are thus readily dispersed by the wind.

The white or silver poplar, the Lombardy poplar with characteristic spire-like habit, and the aspen are species of cottonwoods. (Willow Family)



WILLOWS

(*Salix* species)

One of the welcome signs of spring is the "pussy willow." It is the opening catkin of the male flowers, with numerous tiny willow blossoms partly concealed and protected by an abundance of soft hairs. Female flowers grow on separate plants. In some species the catkins appear with, in others before, the leaves.



FRUITING CATKINS OF WILLOW

Only a few of the very many species are trees. An example is the white willow said to have been brought over from Europe by the Pilgrims. The black willow is perhaps the most easily recognized of all species because of the presence of two ear-like appendages at the base of each leaf. (Willow Family)



FLOWERING WALNUT



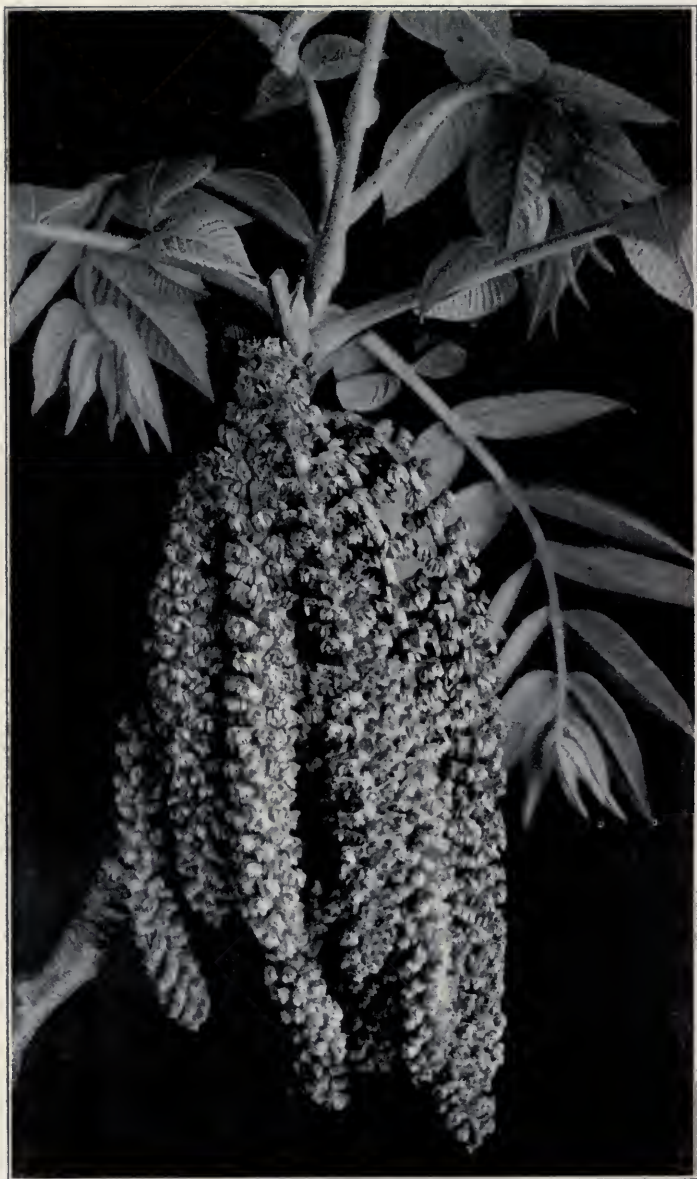
BLACK WALNUT

(*Juglans nigra*)

To many "black walnut" suggests fine old furniture rather than the tree that supplies the wood.

The leaves of this valuable tree consist of many leaflets along a central stalk. The edible fruit is well known, and so is the stain from the fresh hull.

Black walnut is now often cultivated for its timber. It is also a desirable shade tree although it bears its foliage for only a short season. (Walnut Family)



BUTTERNUT IN FLOWER



BUTTERNUT

(Juglans cinerea)

The white walnut, as this tree is often properly called, is distinguished from the black by the clammy character of its leaves and fruits. The nuts are good while fresh but soon become rancid. Like the black walnut, it is a handsome tree of rich woods. The leaves of the walnuts and butternuts are easily distinguished from those of the hickories by their more numerous leaflets. (Walnut Family)



HICKORIES

(*Carya* species)

The popular hickory nuts of markets are mostly from the shag-bark hickory shown here. It is a fine tree with loose or shaggy bark, and leaves mostly consisting of five leaflets. The nuts of the related bitternut and pignut hickories are bitter. The bark of these two species, however, is never loose and the husk of the fruit is comparatively thin.

Hickory leaves suggest those of the ash but unlike the leaves of the latter they are placed alternately on the branches.

The very hard, tough wood is especially desirable for use in making tool handles. (Walnut Family)



BIRCHES and ALDERS

(*Betula* and *Alnus*)

Birches and alders are rather small and slender trees with catkins produced either before or with the finely or sharply toothed leaves. The fruiting catkins of the alder are cone-like and persist on the tree for a long time. The white or paper birch, often grown for ornament, was the canoe birch of the Indians. (Birch Family)



BEECH FRUIT



BEECH

(*Fagus grandifolia*)

The smooth light-gray bark of the tall-growing beech can be recognized from afar. The tree, moreover, has the habit of growing in groves or "pure stands" on rich uplands.

Its leaves are strongly parallel-veined. The nuts are yellowish and when ripe in late autumn have a sweet kernel. Beech wood is considered particularly desirable for smoking meats. It is also used in the manufacture of creosote and for furniture and tools. (Beech Family)



WHITE OAK

(*Quercus alba*)

The acorn is the unique and well-known fruit of the oak. It is interesting to observe the different kinds, for they differ in size and shape for each species of oak.



WHITE OAK CATKINS

There are even several closely related kinds of white oaks. A common one is the bur oak with shaggy acorn cups. Another is the swamp white oak. Its leaves, and those of its relatives, the chestnut oaks, are very shallowly lobed, or have a margin merely wavy. (Beech Family)



RED OAK

(*Quercus* species)

This group of oaks, which includes the black oaks, is easily recognizable from all the white oaks by the sharp or bristle-like points of the leaf lobes. The various red oaks are closely related and consequently distinguished with difficulty. Their wood is used mostly for cheap furniture. The white oaks supply more valuable wood for general construction and for furniture. (Beech Family)



CHESTNUT BURS



AMERICAN CHESTNUT

(Castanea dentata)

This, the true American chestnut, is related to the oaks and beeches. Its prickly burs open on the tree after heavy frosts, releasing the sweet nuts which are familiar to us as "roasted chestnuts." The tree is tall and stately, a rapid grower, and is often planted for ornament. (Beech Family)



BLACK CHERRY FRUIT



BLACK CHERRY

(*Prunus serotina*)

The black fruit of the rum cherry, ripe in late summer, is better known than the attractive white blossoms borne in the spring. The tree grows in mixed woods and usually is rather irregular in form, although large and tall. The bitter bark is the source of a tonic drug. This cherry is related to the grape or bird cherry of Europe. (Rose Family)



PLANE TREE. SYCAMORE
(*Platanus occidentalis*)

The rather maple-like foliage and the characteristic pendent balls or "buttons" of small flowers or fruits and the smooth bark peeling off in broad plates are the conspicuous features of this tree. Sometimes it is called buttonwood.

It is at home in rich soils along streams where it is one of our largest and finest trees. (Plane Tree Family)



LOCUSTS

(Gleditsia and Robinia)

The picture shows the pods of the honey locust, a large thorny tree with small green flowers that is often planted. The common or black locust has clusters of large fragrant white flowers and fewer and larger leaflets. It is not thorny. (Pea Family)



TREE OF HEAVEN

(*Ailanthus altissima*)

This tree can be distinguished easily from any other by its extremely long, compound leaves with very many leaflets, mostly borne near the tips of the thick branches. The branches are unusually robust and stocky. The small male and female flowers are produced on different individuals. The winged fruits, in large clusters, ripen late in autumn.



FRUIT OF TREE OF HEAVEN

The common name is said to refer to the great height the tree attains in China, its native land. It is frequent in America as a shade tree, particularly in cities, because of its immunity to smoke. Since it spreads by "suckers" it often forms clumps of many stems. (Quassia Family)



FLOWERS OF RED MAPLE



RED MAPLE

(*Acer rubrum*)

In early spring the bright red flowers of the swamp or red maple cover the leafless twigs and redden the low-land maple woods. In autumn the leaves turn crimson. They are characterized by the oblong or parallel-edged base of the middle lobe.

This maple is sometimes planted as a shade tree.
(Maple Family)



FRUITS OF SUGAR MAPLE



SUGAR MAPLE

(*Acer saccharum*)

The sugar or rock maple is the source of maple sugar, and its wood is highly valued. It is a slow-growing tree found in rich woods and is planted generally for its dense shade and for its brilliant, yellow and scarlet autumn foliage.

The sugar maple unfolds its flowers and leaves at the same time. Its leaves are lobed but not toothed. (Maple Family)



ASHES

(*Fraxinus* species)

The foliage of the ash tree suggests that of the hickory, but the leaves of the ash are placed opposite each other. The fruit is winged, as is that of the maple, although it is not double like the latter, and it is often borne in large masses. The blossoms come out in tight bunches before the foliage.



FRUITS OF ASH

The ash is one of the last trees to leaf out in the spring, along with the oak and walnut, but drops its leaves early in the fall. Among the ashes are several species with exceptionally tough wood. (Olive Family)



HORSE CHESTNUT



HORSE CHESTNUT. BUCKEYE

(*Aesculus* species)

The horse chestnut need never be confused with the chestnut, if the decided difference in the leaves is noticed, for they consist of seven leaflets, spreading fan-like from the end of the leaf stem.

The horse chestnut is a European tree commonly planted, and now also escaped from cultivation, in this country. It has pyramidal clusters of showy white flowers spotted with purple and yellow. The Ohio buckeye is a similar native tree but with usually only five leaflets, smoother fruit, and much less conspicuous blossoms. (Buckeye Family)



LINDEN. BASSWOOD

(Tilia americana)

This is the famous "bee-tree" of rich woods, its fragrant cream-colored flowers, which appear in May or June, attracting myriads of bees. The honey is highly prized, especially by those who have become accustomed to it.



LINDEN FRUIT

The linden is a beautiful tree with a rounded top. It has an abundance of large heart-shaped leaves and is a favorite shade tree. Its flower and fruit stalks seemingly come out of the center of a wing-like structure. The round fruit is dry and woody. (Linden Family)



PODS OF CATALPA



Courtesy of Frank M. Woodruff, Curator, The Chicago Academy of Sciences

CATALPA

(*Catalpa* species)

The catalpa and the horse chestnut are our showiest trees when in bloom. The catalpa has loose clusters of large bell-shaped white flowers, which bloom for several weeks. The very large, heart-shaped leaves borne on long stalks mark the tree well. Its long cylindrical pods, known as Indian beans, filled with winged seeds, remain on the tree until spring.

The catalpa has been generally planted for ornament, and in groves for its rapid production of rot-resistant wood, but the tree is readily injured by the wind and is very subject to attack by insects. (Trumpet Vine Family)



WHITE PINE



PINE

(Pinus species)

There are many different species of pines, but they can all be recognized from other evergreen trees by the bundled needle-like leaves. The white pine shown in the picture has five needles in each bundle; most other species have only two or three.

Pines grow in the northern hemisphere and are very important timber trees. Some have large seeds, known as "pine nuts." (Pine Family)



SPRUCE



SPRUCE

(*Picea* species)

Spruces are, perhaps, the most popular evergreens in cultivation. Their branches are usually arranged closely in whorls, which partly accounts for their dense habit. Colorado spruce, often planted, has a gray-blue hue.

The needles of the spruce always occur singly on the branchlets and are never in bundles. The cones do not fall readily or break up. (Pine Family)



FIR



FIR

(Abies species)

The fir trees are very similar to spruces in general appearance and also have their needles borne singly. They can be distinguished easily if the leaves are closely observed, for these are flat. Those of the spruce are keeled on both surfaces, making them four-sided.

Some species of firs are among our largest and most valuable timber trees. (Pine Family)



TAMARACK. LARCH

(*Larix* species)

In the summertime this tree with spreading branches resembles an evergreen but its soft leaves or needles fall with the frost. They are in bundles like those of the pine, but there are many of them in each bundle and they are borne on a curious knob. The tamarack grows in swamps. (Pine Family)

